

## CLAIM(S)

1. A torque sensitive sanitary diaphragm valve comprising:
  - (a) a housing having
    - a flow housing area with a shape for the transfer of solution through the flow housing area and
    - a stem housing area with a first opening attached to the flow housing area and a second opening threaded;
  - (b) a stem with
    - a top,
    - a middle counter-threaded for the stem housing's second opening, and
    - a bottom shaped to mate with the shape of the flow housing area;
  - (c) a handle;
  - (d) a diaphragm with a chemical contact side and a stem contact side located in the first opening of the stem housing between the stem and the flow housing area; and
  - (e) a slipping mechanism located between the handle and the stem.
2. A torque sensitive sanitary diaphragm valve comprising:
  - (a) a housing having
    - a flow housing area with a shape for the transfer of solution through the flow housing area and
    - a stem housing area with a first opening attached to the flow housing area,
    - a second opening, and
    - a handle attachment area threaded;
  - (b) a stem with

- a top,
  - a middle enclosed in the stem housing area, and
  - a bottom shaped to mate with the shape of the flow housing area;
  - (c) a handle counter-threaded for attachment to the stem housing attachment area and affixed to the stem allowing the handle to pivot without rotation of the stem;
  - (d) a diaphragm with a chemical contact side and a stem contact side located in the first opening of the stem housing between the stem and the flow housing area; and
  - (e) a slipping mechanism located either between the stem housing and the stem housing's threaded handle attachment area or between the handle and the handle's counter-threaded stem housing attachment area.
3. A torque sensitive sanitary diaphragm valve comprising
- (a) a housing having
    - a flow housing area with a shape for the transfer of solution through the flow housing area and
    - a stem housing area with
      - a first opening attached to the flow housing area
      - a second opening, and
      - a handle attachment area;
  - (b) a stem with
    - a top and a middle both threaded as an area for attachment of the handle and
    - a bottom shaped to mate with the shape of the flow housing area;

- (c) a handle counter-threaded for attachment to the threaded stem's handle attachment area and attached to the stem housing allowing the handle to pivot without rotation of the stem housing.
  - (d) a diaphragm with a chemical contact side and a stem contact side located in the first opening of the stem housing between the stem and the flow housing area; and
  - (e) a slipping mechanism located between the handle and the stem.
4. A pharmaceutical valve for use with biological and chemical transfer equipment having a housing with a flowing housing area having a shape for the transfer of a solution through the flow housing area, and a stem housing area having a first opening attached to the flow housing area and a second opening threaded for vertical motion within the stem housing area, the pharmaceutical valve comprising:
- a stem with
    - a top,
    - a middle counter-threaded for the stem housing's second opening, and
    - a bottom shaped to mate with the shape of the flow housing area;
  - a handle;
  - a diaphragm with a chemical contact side and a stem contact side located in the first opening of the stem housing between the stem and the flow housing area; and
  - a slipping mechanism located between the handle and the stem.
5. A pharmaceutical valve for use with biological and chemical transfer equipment having a housing with a flowing housing area having a shape for the transfer of a solution through the flow housing area, and a stem housing area having a first opening attached to the flow housing

area and a second opening threaded for vertical motion within the stem housing area, the pharmaceutical valve comprising:

- a stem with

- a top,

- a middle counter-threaded for the stem housing's second opening, and

- a bottom shaped to mate with the shape of the flow housing area;

- a handle counter-threaded for attachment to the stem housing attachment area and affixed to the stem allowing the handle to pivot without rotation of the stem;

- a diaphragm with a chemical contact side and a stem contact side located in the first opening of the stem housing between the stem and the flow housing area; and

- a slipping mechanism located either between the stem housing and the stem housing's threaded handle attachment area or between the handle and the handle's counter-threaded stem housing attachment area.

6. A pharmaceutical valve for use with biological and chemical transfer equipment having a housing with a flowing housing area having a shape for the transfer of a solution through the flow housing area, and a stem housing area having a first opening attached to the flow housing area and a second opening having a handle attachment area for vertical motion within the stem housing area, the pharmaceutical valve comprising:

- a stem with

- a top and a middle both threaded as an area for attachment of the handle, and

- a bottom shaped to mate with the shape of the flow housing area;

a handle counter-threaded for attachment to the threaded stem's handle attachment area and attached to the stem housing allowing the handle to pivot without rotation of the stem housing;

a diaphragm with a chemical contact side and a stem contact side located in the first opening of the stem housing between the stem and the flow housing area; and

a slipping mechanism located between the handle and the stem.

7. A method of preventing the flow of fluids in equipment making biological or chemical therapeutics using pharmaceutical valves according to claim 1.
8. A method of preventing the flow of fluids in equipment making biological or chemical therapeutics using pharmaceutical valves according to claim 2.
9. A method of preventing the flow of fluids in equipment making biological or chemical therapeutics using pharmaceutical valves according to claim 3.
10. A method of preventing the flow of fluids in equipment making biological or chemical therapeutics using pharmaceutical diaphragm valves according to claim 4.
11. A method of preventing the flow of fluids in equipment making biological or chemical therapeutics using pharmaceutical valves according to claim 5.
12. A method of preventing the flow of fluids in equipment making biological or chemical therapeutics using pharmaceutical valves according to claim 6.